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Pesticide Fact Sheet Number 10: Feneminosulf

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15. Supplementary Notes

16. Abstract (Limit: 200 words)

This document contains up-to-date chemical information, including a summary of the Agency's regulatory position and rationale, on a specific pesticide or group of pesticides. A Fact Sheet is issued after one of the following actions has occurred.

1. Issuance or reissuance of a registration standard,
2. Issuance of each special review document,
3. Registration of a significantly changed use pattern,
4. Registration of a new chemical, or
5. An immediate need for information to resolve controversial issues relating to a specific chemical or use pattern.

17. Document Analysis a. Descriptors

Pesticides, regulations, Chemical Information Fact Sheet, Use Patterns, Science Findings

b. Identifiers/Open-Ended Terms

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United States
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Office of Pesticides and Toxic Substances
Office of Pesticide Programs (TS-768C)
Washington, DC 20460

EPA

Pesticide Fact Sheet

Name of Chemical: FENEMINOSULF
Reason for Issuance:
Date Issued: Oct. 14, 1983
Fact Sheet Number: 10

1. Description of the Chemical:

Generic name: p-(dimethylamino)benzenediazo sodium sulfonate
Common name: Fenaminosulf
Trade name: Lesan, Dexon, Bayer 22555, Bayer 5072, diazoben
EPA Shaughnessy Code: 034201
Chemical abstracts service (CAS) number: 140-56-7
Year of initial registration: 1959
Pesticide type: Fungicide
Chemical Family: sulfonated phenyl diazo
U.S. and foreign producer: Mobay Chemical Corporation

2. Use Patterns and Formulations:

Application sites: vegetables, ornamentals, lawns, and turf
Types and methods of application: dry or as a slurry, soil drench, foliar spray or protectant seed treatment
Application rates: 0.005 to 17 lb ai/A on crop sites
Types of formulations: Available as a wettable powder, dust and granular formulations (80% technical product; 70,35,32, and 5% WP; 2,5% D; 5 and 0.4% G)
Usual carrier: water

3. Science Findings:

Summary science statement:
There are extensive data gaps for Fenaminosulf. No human toxicological hazards of concern, other than mutagenicity, have been identified in studies reviewed by the Agency for the standard. The Agency has no information that indicates continued use will result in any unreasonable adverse effects to man or his environment during the time required to develop the data.

Chemical characteristics:
Fenaminosulf is a yellowish-brown, odorless powder. It is soluble in water (2-3% at 25°C). The chemical does not present any unusual handling hazards.

Toxicologic characteristics:
Chronic toxicology studies:
Mutagenicity: positive results
Fenaminosulf is structurally related to the azo dyes that are known carcinogens

Major routes of exposure: dermal and inhalation from field uses

Physiological and biochemical behavioral characteristics:
Mechanism of pesticidal action: appears to inhibit mitochondrial function
Metabolism and persistence in plants and animals: There is no data on plant and animal metabolism or bioaccumulation potential.

Environmental characteristics:
Absorption and leaching in basic soil types: appears to degrade with a half-life of 2 days in soil
Studies are inadequate to reach a final conclusion about the fate of Fenaminosulf in the environment or the exposure potential of the chemical to humans and wildlife

Ecological characteristics:
Hazards to fish and wildlife:
Avian acute oral LD_{50}: 13 mg/kg
Avian subacute dietary LC_{50}: 250 ppm
Fish LC_{50}: >[illegible] ppm
Aquatic invertebrates LC_{50}: Scuds 3.7 ppm; Stoneflies 24 ppm
Potential problems for endangered species: The use patterns do not present any problem to endangered species.

Tolerance Assessments:
There are no tolerances established for Fenaminosulf residues in or on any crop, or animal product. When the chemical was first registered, seed treatments were considered non-food uses. The Agency's current position is that seed treatments are considered food uses until data is submitted showing no uptake of the chemical or its' degradates. Therefore metabolic studies are needed to determine the residues of concern and if tolerances must be established. If tolerances need to be established, additional data requirements may have to be met.

Problems known to have accurred from use: (PIMS) There have been 21 cases of exposure reported from mixing, loading, or field reentry. No exposures have resulted in fatality.

4. Summary of Regulatory Position and Rationale:

Use classification: general

5. Summary of Major Data Gaps:

Product Chemistry: studies due 5/84
Discussion of formation of ingredients
Preliminary analysis
Analytical methods
Certification of limits
Physical and chemical characteristics
Residue Chemistry: studies due 11/87
Plant residue
Animal residue
Meat/milk/poultry/eggs residue

Environmental Fate: studies due 11/87
- Hydrolysis
- Photodegradation
- Aerobic metabolism
- Leaching and absorption/desorption
- Dissipation
- Fish accumulation

Toxicology: studies due 11/87
- Primary eye irritation - rabbit
- Primary dermal irritation
- Dermal sensitization
- Acute Oral LD_{50} - rat
- Acute Dermal LD_{50} - rat
- Acute Inhalation LC_{50}
- 21 day dermal
- Chronic toxicity - 2 species
- Oncogenicity - 2 species
- Teratogenicity - 2 species
- Reproduction, 2 generation
- Gene mutation
- Chromosomal aberration
- General metabolism

Wildlife and Aquatics: studies due 11/87
- Avian dietary - upland game
- Acute LC_{50} - invertebrates

6. Contact person at EPA:

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